## **EAST Search History**

## **EAST Search History (Prior Art)**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S12	1704	347/9	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 17:49
S13	1000	347/9.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 17:49
S14	255	347/9 and (Plunger or piston or pump)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 17:50
S15	2	347/9 and ((Plunger or piston or pump)NEAR2 (Acceleration or deceleration or accelerat\$4 or decelerat\$4 or speed or velocity))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 18:28
S18	207	"347"/\$\$\$ and ((Plunger or piston or pump)NEAR2 (Acceleration or deceleration or accelerat\$4 or decelerat\$4 or speed or velocity))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 18:29
S19	207	"347"/\$\$\$ and ((Plunger or piston or pump)NEAR2 (Acceleration or deceleration or accelerat\$4 or decelerat\$4 or speed or velocity))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 19:10
S20	63	"347"/\$\$\$ and ((Plunger or piston or pump)NEAR2 (Acceleration or deceleration or accelerat\$4 or decelerat\$4 ))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 18:29
S22	1240	"222"/\$\$\$ and ((Plunger or piston or pump)NEAR2 (Acceleration or deceleration or accelerat\$4 or decelerat\$4 or speed or velocity))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 19:11

S23	107	"222"/\$\$\$ and ((Plunger or piston or pump)NEAR (Acceleration or deceleration or accelerat\$4 or decelerat\$4 ))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 19:11
S24	76	"222"/\$\$\$ and ((Plunger or piston )NEAR(Acceleration or deceleration or accelerat\$4 or decelerat\$4 ))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 19:12
S28	1068	347/20.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/20 17:14
S30	10	"347"/\$\$\$.ccls. and ( (Plunger or piston or pump) near2 ( (seal \$3 adj (rib or ring)) or gasket \$3 ))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/20 17:15
<b>S</b> 31	57	"347"/\$\$\$.ccls. and ( (Plunger or piston or pump) with ( (seal \$3 adj (rib or ring)) or gasket \$3 ))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/20 17:15
<b>S</b> 32	0	\$31 and ( (metering or calibrat \$3 or graduat\$4) near (tube or cylinder or pipe or canal or conduit or duct or channel ))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/20 17:23
<b>S3</b> 3	1	\$31 and ( (Plunger or piston or pump) near2 ( (air or gas or bubble )adj (remov\$4 or exhaust\$3 or vent or hole or groove or slit or entrap\$4 or trap or trapp\$3)) )	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/20 17:23
S34	1830	"222"/\$\$\$.ccls. and ( (Plunger or piston or pump) with ( (seal \$3 adj (rib or ring)) or gasket \$3 ))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/20 17:26
<b>S</b> 35	54	\$34 and ( (metering or calibrat \$3 or graduat\$4) near (tube or cylinder or pipe or canal or conduit or duct or channel ))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/20 17:27

S37	0	S35 and ( (Plunger or piston or pump) with ( (air or gas or bubble )adj (remov\$4 or exhaust\$3 or vent or hole or groove or slit or entrap\$4 or trap or trapp\$3)) )	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/20 17:28
S38	4	S35 and ( (Plunger or piston or pump) same ( (air or gas or bubble )adj (remov\$4 or exhaust\$3 or vent or hole or groove or slit or entrap\$4 or trap or trapp\$3)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/20 17:28
<b>S</b> 39	499	"141"/\$\$\$.ccls. and ((Plunger or piston or pump) with ((seal \$3 adj (rib or ring)) or gasket \$3))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/20 17:34
<b>S</b> 40	10	\$39 and ( (metering or calibrat \$3 or graduat\$4) near (tube or cylinder or pipe or canal or conduit or duct or channel ))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/20 17:34
S42	4	\$39 and ( (Plunger or piston or pump) near2 ( (air or gas or bubble )adj (remov\$4 or exhaust\$3 or vent or hole or groove or slit or entrap\$4 or trap or trapp\$3)) )	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/20 17:46
<b>S4</b> 3	34236	( (Plunger or piston or pump) with ( (seal\$3 adj (rib or ring)) or gasket\$3 ))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/20 17:53
S44	324	((Plunger or piston or pump) with ((seal\$3 adj (rib or ring)) or gasket\$3))and ((metering or calibrat\$3 or graduat\$4 or scal\$3) near (tube or cylinder or pipe or canal or conduit or duct or channel))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/20 17:53
<b>S</b> 45	1	( (Plunger or piston or pump) with ( (seal\$3 adj (rib or ring)) or gasket\$3 ))and ( (metering or calibrat\$3 or graduat\$4 or scal\$3) near (tube or cylinder or pipe or canal or conduit or duct or channel ))and ( (Plunger or piston or pump) near2 ( (air or gas or bubble ) adj (remov\$4 or exhaust\$3 or vent or hole or groove or slit or entrap\$4 or trap or trapp\$3)) )	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	MOR	<b>N</b>	2008/03/20 17:54

S46	64	( (Plunger or piston or pump) with ( (seal\$3 adj (rib or ring)) or gasket\$3 ))and ( (metering or calibrat\$3 or graduat\$4 or scal\$3) near3 (tube or cylinder or pipe or canal or conduit or duct or channel ))and ( (Plunger or piston or pump) with ( (air or gas or bubble )adj (remov\$4 or exhaust\$3 or vent or hole or groove or slit or entrap\$4 or trap or trapp\$3)) )	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	O	2008/03/20
S47	1239	((Plunger or piston or pump) with ((seal\$3 adj (rib or ring)) or gasket\$3))and ((Plunger or piston or pump) with ((air or gas or bubble)adj (remov\$4 or exhaust\$3 or vent or hole or groove or slit or entrap\$4 or trap or trapp\$3)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/21 09:34
S48	7	( (Plunger or piston or pump) near ( (seal\$3 adj (rib or ring)) or gasket\$3 ))and ( (Plunger or piston or pump) near ( (air or gas or bubble )adj (remov\$4 or exhaust\$3 or vent or hole or groove or slit or entrap\$4 or trap or trapp\$3)) )	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	00 00 00	2008/03/21 09:35
S49	189	( (Plunger or piston or pump) near3 ( (seal\$3 adj (rib or ring)) or gasket\$3 ))and ( (Plunger or piston or pump) near3 ( (air or gas or bubble ) adj (remov\$4 or exhaust\$3 or vent or hole or groove or slit or entrap\$4 or trap or trapp\$3)) )	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/21 09:35
<b>S</b> 50	88	( (Plunger or piston or pump) near2 ( (seal\$3 adj (rib or ring)) or gasket\$3 ))and ( (Plunger or piston or pump) near2 ( (air or gas or bubble ) adj (remov\$4 or exhaust\$3 or vent or hole or groove or slit or entrap\$4 or trap or trapp\$3)) )	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	· OO	2008/03/21
S94	91	"347"/\$\$\$.ccls. and ( ((Plunger or piston) near2 (accelerat\$4 or velocity or speed) ) WITH ((Plunger or piston) near2 (decelerat\$4 or velocity or speed) ) )	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/08/15 13:40

S95	74	"347"/\$\$\$.ccls. and ( ((Plunger or piston) near2 (accelerat\$4 or velocity or speed) ) WITH ((Plunger or piston) near2 (decelerat\$4 or velocity or speed) ) ) AND ( (control\$3 or driv\$3) near3 (graph or signal or waveform or voltage) )	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/08/15 13:40
S98	4085	( ((Plunger or piston) near2 (accelerat\$4 or velocity or speed) ) WITH ((Plunger or piston) near2 (decelerat\$4 or velocity or speed) ) ) AND ( (control\$3 or driv\$3) near3 (graph or signal or waveform or voltage) )	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/08/15 14:00
S99	832	( ((Plunger or piston) near2 (accelerat\$4 or velocity or speed) ) WITH ((Plunger or piston) near2 (decelerat\$4 or velocity or speed) ) ) SAME ( (control\$3 or driv\$3) near3 (graph or signal or waveform or voltage) )	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/08/15 14:00
S100	355	(((Plunger or piston) near2 (accelerat\$4 or velocity or speed)) WITH ((Plunger or piston) near2 (decelerat\$4 or velocity or speed))) with ((control\$3 or driv\$3) near3 (graph or signal or waveform or voltage))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/08/15 14:00
S101	26	(((Plunger or piston) near2 (accelerat\$4 or velocity or speed)) WITH ((Plunger or piston) near2 (decelerat\$4 or velocity or speed))) with ((control\$3 or driv\$3) near3 (graph or signal or waveform or voltage)) and ((eject\$3 or discharg\$3)near2 (fluid or ink or liquid))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/08/15 14:02
S105	0	"347"/\$\$\$.ccls. and ( ((Plunger or piston) near2 (accelerat\$4 and decelerat\$4)) and (control \$3 or driv\$3) near3 (graph or signal or waveform or voltage))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/08/15 14:52
S107	1	"347"/\$\$\$.ccls. and ( ((Plunger or piston) with (accelerat\$4 and decelerat\$4)) and (control\$3 or driv\$3) near3 (graph or signal or waveform or voltage))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/08/15 14:53

S108	10	"347"/\$\$\$.ccls. and ( ((Plunger or piston) with (accelerat\$4 and decelerat\$4)) )	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/08/15 14:54
S133	6608	347/9,20,54,47,10.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/10/15 11:06
S134	9591	347/9,20,54,47,10,85.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/10/15 11:06
S135	23	347/9,20,54,47,10,85.ccls. and ((stop\$4 or break\$3 or ceas\$4 or halt\$3 or paus\$3 or terminat \$3 or shut\$4) near1 (plunger or piston))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/10/15 11:29
S136	77	347/9,20,54,47,10,85.ccls. and ((stop\$4 or break\$3 or ceas\$4 or halt\$3 or paus\$3 or terminat \$3 or shut\$4) near2 (plunger or piston) near3 (decelerat\$4 or velocity or speed))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/10/15 11:52
S137	7	347/9,20,54,47,10,85.ccls. and ((stop\$4 or break\$3 or ceas\$4 or halt\$3 or paus\$3 or terminat \$3 or shut\$4) near2 (plunger or piston) near3 (decelerat\$4 or velocity or speed)) not silverbrook.as.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/10/15 11:53
S138	11	"347"/\$\$\$.ccls. and ((stop\$4 or break\$3 or ceas\$4 or halt\$3 or paus\$3 or terminat\$3 or shut \$4) near2 (plunger or piston) near3 (decelerat\$4 or velocity or speed)) not silverbrook.as.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/10/15 11:54
S139	11	"347"/\$\$\$.ccls. and ((stop\$4 or break\$3 or ceas\$4 or halt\$3 or paus\$3 or terminat\$3 or shut \$4) near2 (plunger or piston) near3 (decelerat\$4 or velocity or speed)) not silverbrook.as.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/10/15 11:57
S140	14	"239"/\$\$\$.ccls. and ((stop\$4 or break\$3 or ceas\$4 or halt\$3 or paus\$3 or terminat\$3 or shut \$4) near2 (plunger or piston) near3 (decelerat\$4 or velocity or speed)) not silverbrook.as.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/10/15 11:58

S141	14	"251"/\$\$\$.ccls. and ((stop\$4 or break\$3 or ceas\$4 or halt\$3 or paus\$3 or terminat\$3 or shut \$4) near2 (plunger or piston) near3 (decelerat\$4 or velocity or speed)) not silverbrook.as.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/10/15 12:00
S142	11	"222"/\$\$\$.ccls. and ((stop\$4 or break\$3 or ceas\$4 or halt\$3 or paus\$3 or terminat\$3 or shut \$4) near2 (plunger or piston) near3 (decelerat\$4 or velocity or speed)) not silverbrook.as.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/10/15 12:01
S143	3	"141"/\$\$\$.ccls. and ((stop\$4 or break\$3 or ceas\$4 or halt\$3 or paus\$3 or terminat\$3 or shut \$4) near2 (plunger or piston) near3 (decelerat\$4 or velocity or speed)) not silverbrook.as.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/10/15 14:31
S144	0	347/9,20,54,47,10,85.ccls. and ( (plunger or piston) and (storage or container or bag or cartridge) and (valve) and((stop \$4 or break\$3 or ceas\$4 or terminat\$4 or shut\$4 or halt\$3) near1(plunger or piston)) and (decelerat\$3 or accelerat\$4 or velocity or speed) ).CLM.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/10/15 14:53
S145	0	"347"/\$\$\$.ccls. and ( (plunger or piston) and (storage or container or bag or cartridge) and (valve) and((stop\$4 or break\$3 or ceas\$4 or terminat \$4 or shut\$4 or halt\$3) near1 (plunger or piston)) and (decelerat\$3 or accelerat\$4 or velocity or speed) ).CLM.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/10/15 14:54
S146	37	( (plunger or piston) and (storage or container or bag or cartridge) and (valve) and((stop \$4 or break\$3 or ceas\$4 or terminat\$4 or shut\$4 or halt\$3) near1(plunger or piston)) and (decelerat\$3 or accelerat\$4 or velocity or speed) ).CLM.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/10/15 14:54
S147	6	( (plunger or piston) and (storage or container or bag or cartridge) and (valve) and((stop \$4 or break\$3 or ceas\$4 or terminat\$4 or shut\$4 or halt\$3) near1(plunger or piston)) and (decelerat\$3 ) ).CLM.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/10/15 15:59
S148	23	((KAZUMASA) near2 (IKUSHIMA)).INV.	US-PGPUB; USPAT	OR	ON	2009/10/15 16:04

## **EAST Search History (Interference)**

Ref#	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S149	0	347/9,20,54,47,10,85.cds. and ( (plunger or piston) and (storage or container or bag or cartridge) and (valve) and((stop\$4 or break \$3 or ceas\$4 or terminat\$4 or shut \$4 or halt\$3) near1(plunger or piston)) and (decelerat\$3 or accelerat\$4 or velocity or speed) ). CLM.	USPAT; UPAD	OR	ON	2009/10/15 14:54
S150	0	"347"/\$\$\$.ccls. and ( (plunger or piston) and (storage or container or bag or cartridge) and (valve) and((stop\$4 or break\$3 or ceas\$4 or terminat\$4 or shut\$4 or halt\$3) near1(plunger or piston)) and (decelerat\$3 or accelerat\$4 or velocity or speed) ).CLM.	USPAT; UPAD	OR	ON	2009/10/15 14:54
S151	5	( (plunger or piston) and (storage or container or bag or cartridge) and (valve) and((stop\$4 or break \$3 or ceas\$4 or terminat\$4 or shut \$4 or halt\$3) near1(plunger or piston)) and (decelerat\$3)).CLM.	USPAT; UPAD	OR	ON	2009/10/15 16:03
S152	0	((KAZUMASA) near2 (IKUSHIMA)). INV. and ( (plunger or piston) and (storage or container or bag or cartridge) and (valve) and((stop\$4 or break\$3 or ceas\$4 or terminat \$4 or shut\$4 or halt\$3) near1 (plunger or piston)) and (decelerat \$3 ) ).CLM.	USPAT; UPAD	OR	ON	2009/10/15 16:11
S153	0	(Musashi near Engineering.as.) and ((KAZUMASA) near2 (IKUSHIMA)).INV. and ((plunger or piston) and (storage or container or bag or cartridge) and (valve) and((stop\$4 or break\$3 or ceas\$4 or terminat\$4 or shut\$4 or halt\$3)near1(plunger or piston)) and (decelerat\$3)).CLM.	USPAT; UPAD	OR	ON	2009/10/15 16:13

## 10/15/2009 5:29:46 PM

C:\ Documents and Settings\ hlegesse\ My Documents\ EAST\ Workspaces\ 10565504  $\_$  Method of asjusting droplets (discharging using PLUNGER accelerating and decelerating) .wsp